IN THE CLAIMS:

Please amend the Claims as follows:

R1/26 [[1-47]]1-52. Canceled

original # of claims = 55

55

53-55 cancelled in preliminary amendment (2/20/02)

56 [[48]]53. (Previously Presented) An EPOa-hSA fusion protein, wherein the EPOa moiety is the full coding region of the human EPO sequence but wherein each amino acid residue of the EPOa moiety that serves as a site for glycosylation of the fusion protein is altered such that such a site does not serve as a site for glycosylation in the EPOa; and,

wherein both the albumin moiety and the EPOa moiety of the fusion protein is derived from a human sequence.

57 [[49]]54. (Previously Presented) The EPOa-hSA fusion protein of claim 48, wherein said fusion protein has the formula:

R1-L-R2; R2-L-R1; orR1-L-R2-L-R1,

wherein R1 is an erythropoietin analog amino acid sequence; L is a peptide linker and R2 is a human serum albumin amino acid sequence.

58 [[50]]55. (Previously Presented) The EPOa-hSA fusion protein of claim 49, wherein R1 and R2 are covalently linked via said peptide linker.

59 [[51]]56. (Previously Presented) The EPOa-hSA fusion protein of claim 48, wherein each amino acid residue which serves as an attachment point for glycosylation has been deleted.

60 [[52]]57. (Previously Presented) The EPOa-hSA fusion protein of claim 48, wherein each amino acid residue of human EPO which serves as a site for glycosylation has been replaced with an amino acid residue which does not serve as a site for

glycosylation.

[[53]]58. (Previously Presented) The EPOa-hSA fusion protein of claim 48, wherein said amino acid residue is selected from the group consisting of amino acid residues Asn24, Asn38, Asn83 and Ser126.

[[54]]59. (Previously Presented) The EPOa-hSA fusion protein of claim 48, wherein said glycosylation sites altered include Ser126, Asn24, Asn38 and Asn83.

[[55]]60. (Previously Presented) The EPOa-hSA fusion protein of claim 48, wherein said glycosylation sites altered are either O-linked or N-linked glycosylation sites and are altered by replacing an amino acid residue Asn or Ser with a Gln residue.

[[56]]61. (Previously Presented) The EPOa-hSA fusion protein of claim 48, wherein each of the amino acid residues 24, 38, 83 and 126 have been replaced with Gln.

[[57]]62. (Previously Presented) The EPOa-hSA fusion protein of claim 48, wherein each of the amino acid residues 24, 38, 83 and 126 have been deleted.

[[58]]63. (Previously Presented) The EPOa-hSA fusion protein of claim 57, wherein ~~wherein~~ each of the amino acid residues 24, 38 and 83 have been replaced with Gln and wherein said amino acid residue 126 has been replaced with Ala.

[[59]]64. (Previously Presented) The EPOa-hSA fusion protein of claim 50, wherein said peptide linker is 10 to 30 amino acids in length.

[[60]]65. (Previously Presented) The EPOa-hSA fusion protein of claim 59, wherein each of said amino acids in said peptide linker is selected from the group consisting of Gly, Ser, Asn, Thr and Ala.

[[61]]66. (Currently Amended) The EPOa-hSA fusion protein of claim 50, wherein

said peptide linker is composed of a sequence having the formula (Ser-Ser-Ser-Ser-Gly)y (SEQ ID 5) wherein y is less than or equal to 8.

70 [[62]]67. (Currently Amended) The EPOa-hSA fusion protein of claim 59, wherein said peptide linker is composed of either 2 or 3 tandem repeats of a sequence having the formula ((Ser-Ser-Ser-Ser-Gly)$_3$-Ser-Pro (SEQ ID 4).

71 [[63]]68. (Previously Presented) The EPOa-hSA fusion protein of claim 48, wherein the fusion protein includes from left to right, an EPOa which includes amino acid residues Gln24, Gln38, Gln83 and Alal26, a peptide linker, and human serum albumin.

72 [[64]]69. (Currently Amended) The EPOa-hSA fusion protein of claim 48, wherein the fusion protein is from left to right, Gln24, Gln38, Gln83, Ala126 EPO, a peptide linker having the formula ((Ser-Gly-Gly-Gly-Gly)$_3$-Ser-Pro) (SEQ ID 4) and human serum albumin.

73 [[65]]70. (Previously Presented) The EPOa-hSA fusion protein of claim 48, wherein the EPOa-hSA fusion protein includes, from left to right, human serum albumin, a peptide linker, and an EPOa which includes amino acid residues Gln24, Gln38, Gln83 and Ala126.

74 [[66]]71. (Previously Presented) The EPOa-hSA fusion protein of claim 65, wherein the EPOa is Gln24, Gln38, Gln83, Alal26 EPO.

75 [[67]]72. (Currently Amended) The EPOa-hSA fusion protein of claim 48, wherein the fusion protein is from left to right, human serum albumin, a peptide linker having the formula ((Ser-Gly-Gly-Gly-Gly)$_3$-Ser-Pro) (SEQ ID 4), and Gln24, Gln38, Gln83, Ala126 EPO.

76 [[68]]73. Canceled

47. A method of treating a subject in need of erythropoietin comprising administering a therapeutically effective amount of an EPOa-hSA fusion protein to the subject.

48. The method of claim 47, wherein the method comprises administering a nucleic acid encoding an EPO-hSA fusion protein to the subject.

49. The method of claim 48, wherein the nucleic acid is administered in a cell.

50. The method of claim 49, wherein the cell is an autologous cell.

51. An erythropoietin analog, wherein four sites which serve as sites for glycosylation in erythropoietin are altered such that they do not serve as glycosylation sites.

52. The erythropoietin analog of claim 48 wherein the EPOa is Gln24, Gln38, Gln83, Ala126 EPO.

53. The transgenic organism of claim 40, wherein the organism is a rabbit.

54. The transgenic organism of claim 40, wherein the organism is a bird.

55. A method for making an EPOa-hSA fusion protein in a cultured cell comprising supplying a cell which includes a nucleic acid which encodes an EPOa-hSA fusion protein, and expressing the EPOa-hSA fusion protein from the nucleic acid, thereby making the EPOa-hSA fusion protein.

original claims of 10/081,400 showing 55 claims